

### **REMARKS**

In response to the Examiner's Action mailed on March 17, 2004, claims 1 to 2, 8 to 9, and 23 are canceled and claims 3, 6-7, and 10-18 are amended. The applicants hereby respectfully request that the patent application be reconsidered.

An item-by-item response to Examiner's objections or rejections is provided in the followings:

**1. *Rejections of Claims under 35 USC§112***

The Examiner rejects claims 1-7 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner rejects claim 1 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: it is not clear what "described by implant dose and implant energy" refers to. Claims 2-4 and 7 are included for their dependence on claim 1. Claim 6 includes "may have a thin oxide coating" is indefinite since the language infers that the oxide coating does not have to be present.

In response to the rejections, claims 1 is canceled and claim 3 and 6 are amended. The amended claims 3 and 6 now include the essential structural cooperative relationships of elements in claim 1 and specifically include a thin oxide coating in claim 6.

**2. *Rejections of Claims under 35 USC§102***

The Examiner rejects Claims 1-2 under 35 U.S.C. 102(e) as being anticipated by *Koveshnikov et al* (US 6,620,632).

According to the Examiner, as to claims 1-2, Koveshnikov discloses a

method of evaluating impurity concentrations in semiconductor substrates, comprising: a thin film supported on said monitor substrate wherein the thin film having an optical characteristic that is sensitive to said ion-implantation damage, the thin film having a reflectivity that is sensitive to ion-implantation damage (col. 6, lines 23-30 and 49-59).

In response to the rejection, claims 1 to 2 are canceled. The cancellation of the claims 1 and 2 does not constitute an admission of the lack of novelty or obvious under the cited prior art references. The cancellation of the claims is for the purpose to issue the allowed claims as a patent and to prosecute the rejected claims later in a Continuous Application.

### 3. *Rejections of Claims under 35 USC§103*

The Examiner rejects Claims 6-7 under 35 U.S.C. 103(a) as being unpatentable over *Koveshnikov et al* (US 6,620,632).

According to the Examiner, as to **claims 6-7**, Koveshnikov discloses everything claimed, as applied above, in addition a silicon substrate is provided (col. 6, lines 15-20) with a thin film (col. 6, lines 25-30). Koveshnikov differs from the claimed invention in that a thin oxide coating is not specifically provided, however since the oxide layer is necessary for ion-implantation it would have been obvious to one having ordinary skill in the art at the time of invention to include a thin oxide layer. As to the thickness of the thin film, it would have been obvious to one having ordinary skill in the art at the time of invention to use a film of any thickness necessary to support implantation.

The Examiner further rejects claims 8-9, 12-13, 16-18, and 23 under 35 U.S.C. 103(a) as being unpatentable over Yang (6,373,576) in view of Tsuya et al (4,682,206).

According to the Examiner, as to claims 8 and 23, Yang discloses a method for measuring concentration of dopants in a liquid carrier on a wafer surface, comprising: measuring reflected light from a monitor (dummy) substrate with a thin film supported on the monitor substrate wherein the thin film has optical characteristics that are sensitive to ion-implantation (col. 1, lines 1-65). Yang

differs from the claimed invention in that a densitometer is not provided; however to do so is well known as taught by Tsuya. Tsuya discloses thin ribbon of semiconductor material where ion-implantation is measured using a densitometer (col. 22, lines 40-60). It would have been obvious to one having ordinary skill in the art at the time of invention to use a densitometer to provide a measure of the density of ion-implantation. As to claim 9, Yang and Tsuya discloses everything claimed, as applied above, in addition Yang includes a light source (13). As to claims 12-13, Yang and Tsuya discloses everything claimed, as applied above, in addition Yang provides a measurement controller and the film has a reflectivity that is sensitive to the ion-implantation energy (col. 1, lines 60-68 and col. 2, lines 15-50). As to claims 16-18, Yang and Tsuya discloses everything claimed, as applied above, in addition Yang provides a silicon (col. 3, line 27) substrate. As to the thickness of the thin film, it would have been obvious to one having ordinary skill in the art at the time of invention to use a film of any thickness necessary to support implantation.

In response to the rejections, claims 8-9 and 23 are canceled. The cancellation of the claims 8-9 and 23 does not constitute an admission of the lack of novelty or obvious under the cited prior art references. The cancellation of the claims is for the purpose to issue the allowed claims as a patent and to prosecute the rejected claims later in a Continuous Application.

Claims 6 to 7 are amended to depend on the amended claim 3 that would be allowable as a dependent claim of an allowable claim. Claims 12-13, 16-18 are amended and would also be allowable as dependent claims of an allowable claim 10.

#### *Allowable Subject Matter*

The Examiner instructs that Claims 19-22 are allowable over the prior art of record.

The Examiner further instructs that claims 3-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The Examiner further instructs that Claims 10-11 and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

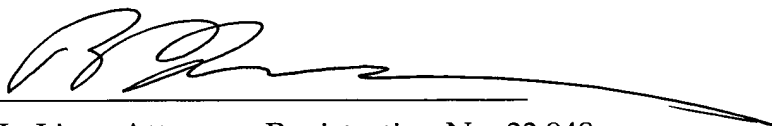
The Examiner further instructs that the following is a statement of reasons for the indication of allowable subject matter: the prior art of record, taken alone or in combination, fails to disclose or render obvious a thin film mixture of dye molecules with weak covalent bonds sensitive to the ion-implantation energy and dosage in a polymer matrix, in combination with the rest of the limitations of the claims.

In response to the objections to these claims, claims 3, 6-7, and 10-18 are amended and claims 3 and 10 are re-written as independent claim that include all the limitations of the base claim and all the elements of the intervening claims. These amended claims would therefore be allowable.

With the canceled and amended claims and the reasons provided above, the applicant hereby respectfully requests that Examiner's rejections under 35 USC § 112, 102 and 103 be withdrawn and the present application be allowed.

Respectfully submitted,  
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By



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